been made during the debate. We appreciate that there are more than one Ministries which are responsible for this very large and very important area and the Finance Ministry is very important among them.

While who should have intervened and all that is a question that I leave to you, Sir, but I will certainly carry all the suggestions to the Prime Minister. There was a suggestion to restructure the Women's Mission and a suggestion to evolve some kind of a mechanism where all Ministries should sit together and work out together to resolve the inter-ministerial issues. These are very important suggestions. We will really take them into account.

THE VICE-CHAIRMAN (PROF. P.J. KURIEN): Now, we shall take up the Statement. Mr. Prithviraj Chavan.

STATEMENTS BY MINISTERS

Radioactive contamination of drinking water at Kaiga Atomic Power Station.

THE MINISTER OF STATE OF THE MINISTRY OF SCIENCE AND TECHNOLOGY, THE MINISTER OF STATE OF THE MINISTRY OF EARTH SCIENCES, THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE, THE MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PUBLIC GRIEVANCES AND PENSIONS AND THE MINISTER OF STATE IN THE MINISTRY OF PARLIAMENTARY AFFAIRS (SHRI PRITHVIRAJ CHAVAN): Sir, I rise to make a statement on the Kaiga incident.

Kaiga Atomic Power Station near Karwar in Uttar Kannada District, Karnataka has got 3 nuclear power reactors and fourth one is under construction. Service building for the Reactor Units-I & II is a combined building. The service building is separate from the reactor building and consists of electrical/mechanical/instrumentation shops, chemical labs, health physics unit, decontamination centre, clothing cribs, change rooms, etc. The radioactivity levels are regularly monitored even in the service building as part of the normal safety procedures. Urine samples of the employees are also routinely tested as a part of this. On 24th November, the results showed "higher than the normal" traces of tritium, which is a heavier isotope of hydrogen, in the urine samples of some of the personnel working in the service building. Following this, checks were made on all plant systems of the Reactors and radiation levels were found to be normal. There was no radioactivity release to the environment or public. The search for source of contamination zeroed in on a water cooler located in the service building. The water cooler was found to have contaminated water. It was immediately sealed and put out of service.

Urine samples of about 800 personnel working in the area were analysed and 92 were found to have tritium content "higher than normal". In the event of uptake of tritium by the human body the

flushing processes of the body like urination, perspiration, and excretion, brings down the excess tritium. The process can be hastened through medication. Immediate medical attention was given to the affected people and the workers are now attending to their normal duties and no one is hospitalized. At this stage, two persons are having tritium in their bodies that can cause their extrapolated annual radiation exposure to marginally exceed the Atomic Energy Regulatory Board specified limit of 30 millisievert per year. However, even in the case of these two persons further medical management will bring down their potential radiation exposure to less than the AERB specified limit in a short time. (The limit specified by the International Commission on Radiation Protection is 50 mSv per year, whereas the AERB has prescribed a lower limit of 30 mSv per year as a matter of abundant caution.)

The NPCIL, Nuclear Power Corporation of India Limited, constituted a committee under the Chief Superintendent to go into the details to identify the cause and come out with reasons and remedial actions. The interim report of the committee indicates that some heavy water containing tritium was deliberately added to the drinking water cooler with malafide intent.

As regards the investigation, the local and central agencies are at work and the evidence like log books, close circuit TV footage, analysis of water samples, etc., are being used to ascertain the facts. In view of the initial conclusion regarding the possibility of mischief by an insider, an FIR has been filed on ibt December at local Mallapur Police Station. Action would be taken against those found responsible for the incident.

In summary, Sir, all the Plant systems are operating safely. There is no damage to the Plant whatsoever. There is no release of radioactivity to the environment. There is no effect on the health and safety of the public. There is no breach of security of the Plant. The limits of exposure of radiation workers in India are specified by the Atomic Energy Regulatory Board, AERB. The AERB limit itself is more stringent than the limits specified by most countries. The exposure of the two radiation workers is currently assessed to be marginally above the AERB limit. However, as the normai biological processes continue to discharge the tritiated water from the body regularly, the final exposure will get reduced with time, All workers continue to be on their regular jobs. Help of local and Central agencies has been taken and the evidence available – log books, CCTV footage, analyses of water samples, etc. - would be used to identify the culprits. An FIR has been filed on 1st December, 2009 at the local police station. All processes, procedures and human performance aspects of all stations of NPCIL are being reviewed again to carry out reinforcement as appropriate.

DR. (SHRIMATI) NAJMA A. HEPTULLA (Rajasthan): Sir, when this news appeared in the newspapers, it was very alarming. Later on, when investigation was done, it was reported that some disgruntled person who had access to Heavy Water with the higher Hydrogen isotope, Tritium, in it, mixed it in the water cooler from where the workers drank water. That is what the investigation says and you have reported to the Parliament.

Sir, it is a very serious matter. Whatever atomic energy generating installations we have, they are all under Government domain. Government has access to everything and they keep a complete, regular check on all the people working over there. I believe, there are those showers, not with water but rays, which remove the level of radioactivity in people who work over there. Also, a complete medical check is done with their urine samples in which traces of the higher isotope could be found. But, Sir, my concern today is this. I believe, now the Minister for External Affairs is going to make a statement about the Prime Minister's visit to the United States of America. We read in the newspapers that further development is taking place in the Indo-US Nuclear Cooperation for Peaceful Development of Power, etc. All the nuclear installations are definitely not going to be in the Government domain, as we have understood, and some of them are going to be in the private domain. Sir, the country is faced with terrorism. Your enquiry says that it was a disgruntled person who did it. It is very dangerous. It is like poisoning people who are working. Have you found out who this disgruntled person was? What was his grievance, to think of killing his own colleagues? Are you sure that he was a disgruntled person and not somebody who had a connection with some terrorist organisation, or used by some people? Now, these are very serious issues. Today it is happening when everything is under Government control and domain. What will be the Government's strategy to look after the safety and security of all the installations? There are going to be a large number of installations in our country. How are you going to keep the safety and security intact, especially in the light of terrorism, which is growing in our country? Yesterday, we had a very serious discussion on the internal security of the country. I would like the hon. Minister to kindly throw some light on steps for the future, and about the present situation.

SHRIMATI BRINDA KARAT (West Bengal): Sir, naturally, the entire country was extremely concerned when we heard this report about the incident which occurred in the Kaiga Atomic Power Station. Looking at the statement of the Minister, he has said, in his statement, that an inquiry has been ordered. At the same time, the Minister's statement has already concluded that there is no breach of security at the plant. If you mean that no outsider has come on the prima facie evidence, what are the contacts between the insider and the outsiders, etc.? These things, obviously, have to

be left to the inquiry. So, I think, it would be better if you could omit this specific sentence in the Minister's statement that there is no security breach in the plant. It would be better to await the full findings of the inquiry before coming to such a conclusion.

Second point is that given the importance that the Government of India is laying on nuclear energy, this incident is also a red alert for the Government because, I believe, this is a breach of security, whether it is internal security or external. This is clearly a breach of security and if this can happen to the extent that heavy water is mixed with drinking water, it should certainly lead to a little more concern on the part of the Government of India than what is expressed in the statement that the hon. Minister has made. Therefore, I would also like to know from the hon. Minister that in the wake of this incident, what are the lessons which the Government has learnt, as far as the security measures are concerned; and, can the Minister give some concrete assurance to the House that there will be no such incidents in future? What are the measures that the Government is planning to take to ensure that they do not recur?

The last point is that there can be long-term impact of radiation and, therefore, I think, it is also necessary for the hon. Minister to ensure that the health of the workers, who may not be immediately affected, should be monitored by a responsible health agency. Please, give us an assurance on that.

SHRI TIRUCHI SIVA (Tamil Nadu): Sir, it goes without saying that atomic power stations are sensitive locations where the authorities have to be extra cautious. Though, nothing much serious has taken place in the Kaiga Atomic Power Station, it is, of course, an alarming one. As per the statement of the hon. Minister, the mischief is done by an insider. What is the question of an insider or outsider? The person who knows something about heavy water, or he is an ordinary person, and if he is a person in a responsible position, what is the action taken? And, I think, while seconding the point made by Shrimati Brinda Karat, I would like to know that learning from this experience, what are the precautions that the Government intend to take to avoid such incidents in future? Though the diagnosis of the people, who have been affected, is not of much botheration, yet they have to be very closely monitored. I hope the Government will take it very seriously.

SHRI M. RAMA JOIS (Karnataka): Mr. Vice-Chairman, Sir, there is another important aspect which I am trying to bring to the notice of the hon. Minister. Just 40 kilometres away from this Kaiga Power Station, there is the Seabird Project belonging to the Naval defence. If any radioactive radiation is released, there will be a big disaster. Even at the time when Kaiga Power Station was

being constructed, there was opposition because just 40 kilometres away, there was the Seabird Project. Therefore, in case of any sabotage and radioactive radiation, it would become a very big national disaster. So, what preventive action is the Government taking to ensure the safety of Seabird Project?

SHRI MATILAL SARKAR (Tripura): Although Brinda ji has said about it, it strikes me, and, I think that it is exception. The interim report of the committee, in point no. 3, says that some heavy water containing tritium was deliberately mixed with the drinking water with malafide intention. It is very serious that it was 'deliberately' done, and, that in this age of safety and security, it could have been done. So, it is the high magnitude of mismanagement. I would like to know what steps have been taken.

THE LEADER OF THE OPPOSITION (SHRI ARUN JAITLEY): Sir, I just wish to supplement what some of my colleagues have said. Obviously, access into the atomic power station is very strictly regulated. Therefore, when the statement says that it is an insider's job, it is obvious that nobody from outside came and mixed the heavy water with the normal drinking water. It had to be an outsider's job. If the quantum were very high, then, perhaps, the casualties could have been there. Is the Government seized of the fact that this could be a serious case of an internal sabotage; even though an insider does it, the links of that insider need not necessarily be because of any individual grievance or disgruntlement; it could be at the behest of certain outsider, and, therefore, this acquires greater seriousness.

Secondly, Sir, with regard to the internal security mechanism, the access is restricted but the movement of people inside the power plant has to be strictly regulated so that if somebody with access to the heavy water, gets hold of it and mixes it with drinking water, some apparatus for surveillance has to catch that; otherwise, activities can go on unrestricted with such radio active material and can have disastrous consequences, and, then, you are only in the realm of possibilities or probabilities as the statement of the Minister today indicates.

DR. (SHRIMATI) NAJMA A. HEPTULLA: Another aspect is, was the drinking water in a pot that somebody went and mixed it; was it in a container that somebody went and mixed it; or, was it a tap connected to the drinking water? We have to see from where the access could have been there, or, where the person could contaminate the drinking water.

THE VICE-CHAIRMAN (PROF. P. J. KURIEN): With the help of the CCTV, you can catch it.

SHRI PRITHVIRAJ CHAVAN: Sir, very important points have been raised. I share the hon. Members' concerns with regard to this incident. Of whatever magnitude it is, we have to be extremely careful when we are dealing with the nuclear installations.

First of all, Najma ji enquired about the consequences of Indo-US Civil Nuclear Cooperation. She indicated that we are expanding on nuclear programmes, and, maybe in future, the nuclear installations need not be only nationally-owned, or, say, Government-owned but could be in the private sector. I would like to very categorically state that as per the present Atomic Energy Act, no private sector can operate a nuclear power plant in India. A company which operates a nuclear power plant in India has to be a Central Government company. I am stressing the word, 'Central' because it cannot even be a State Government company. There could be, theoretically, minority participation of somebody but it has to be run by the Central Government. That is as per the present Act unless this hon'ble House changes the Act.

I would like to definitely assert that this is precisely the reason why we do not contemplate, at this stage, any private sector for running the nuclear power plants. Secondly, yes, the fingers are pointed at somebody inside, which is obvious because I can assure you that no outsider can enter this restricted area. There is a biometric check, there is a card-swipe check, and, at the multiple entry points, video-recording is done. So, the question of any outsider coming in, is just totally ruled out. It has to be somebody insider. What happens there? Heavy water is an important component of the reactor. It is used for cooling, heat exchange and also for moderation. Now, periodically, a very small quantity of heavy water is taken out of the system. It is taken to a chemical lab in an outside area which we called service area. It is checked for amount of tritium that is created. Heavy water itself is quite normal; it is not harmful. But when it gets converted into a heavier isotope of tritium, it becomes critical. Tritium also is a strategic material. So, that routine check is there. How much material we draw out? We draw out in a small vial of about 5 to 10 mililiters. Small vials are taken routinely to just check the physics of the reactor. Therefore, it is taken out of the reactor building into another security area which is called service area, and that is where the chemistry lab is located along with other labs as I indicated in my statement like the mechanical engineering, electrical engineering, etc. There are not common facilities like drinking water facility. So, therefore, it has to be somebody who is working inside. Now, why did he do it? It is a question which is being asked now. Hon. Leader of Opposition also mentioned whether a disgruntled inside element has done that with some other outside support. That is a very important aspect to be inquired, and it has been looked into, as I said. But one thing is absolutely clear that there has to be somebody from inside, and anybody who has now access to the service area are all very highly skilled, knowledgeable people. They are not class IV empioyees or some routine people who are coming there and working. They all know exactly what is happening. So, therefore, we can rule out anybody outside and it is somebody from inside.

Now, hon. Member Brindaji repeated the point when I said 'No breach of security'. Of course, security can be interpreted both ways.

Even the internal system breaks down, it is a serious matter. But my point in the statement was that obviously there was no external breach. That is the point I would like to highlight. But we are equally concerned about what happened inside. It is not a very happy situation that somebody, 'a disgruntled element' for whatever reason, a reason from outside or a reason from within, because of some service matters and all that, it is a cause of concern. But the word 'breach of security' just indicates that it is nobody from outside.

Sir, what lessons have we drawn? Of course, lessons have been drawn, and immediate corrective actions have been taken.

I would also like to say on what Najmaji asked, about what kind of a water cooler it was. Water coolers are there in every organisation, factory. This particular water cooler was one which had a lid from the top. It was a padlock and there is a water pipe connection for fresh water to come in. Now, this particular cooler had a drain pipe for excess water and that pipe, a small pipe, was coming out of the cooler in the storage area and that pipe was turned up there so that if the excess water comes there, then the water could be stopped. Apparently, this person took a small vial of tritiated heavy water and put it in that pipe; this is what we initially think about it. Incidentally, this is the only water cooler with that storage tank capacity. All other water coolers are those faucet type where you don't touch or you don't need glass. You just put your mouth and drink it. Sir, now, obviously every water cooler like that, throughout the country, will have to be looked at. Apparently, there is no direct video camera looking at that water cooler and I think, this is a lapse. I think, nobody thought that water cooler is a dangerous thing. Everybody is looking at the reactor building and the water cooler was not being watched. Of course, it would not happen in future. Now, we have learnt lessons. A very serious inquiry has been conducted by Superintendent of Lab to check up the processes which are there. We have to be extra careful. I think, even more things have been done which I can't share at the moment. The profile of the people who are working is also going to be very carefully analysed. I do not want to go into that direction here.

On the long-term effects on the personnel working, there is a very highly competent health physicians in each reactor building. These people are monitoring everybody on a continuous basis. Now, the radiation is measured about the amount of radiation that the body receives over a period of year, and the figure that I gave, 30 millisievert and 50 millisievert; 50 millisievert, which is the higher limit, is the international limit. But we have tightened it further to call it 30 milliseivert. Sir, these two

people perhaps went to drink water earlier than others because as more fresh water came in, it must have got diluted. That is only a speculation. But these two people did get a higher dose which has been treated.

Now, Hon. Member Mr. Siva asked what we are going to do about it and what precautions we are going to take. We will definitely take all the precautions to prevent any similar incident. Apparently, nobody would think that water cooler could cause a problem. But it did. It has been taken very seriously. The Committee is going to consider all the aspects as to how we can strengthen our processes even further. There will be definitely many more video cameras, CCTV cameras, and they will look at every aspect of it. People will be thoroughly checked.

A mention was made about the release of radioactivity. Had it happened, it would have serious consequences. But we are not talking about any release of radioactivity from the main reactor. It is completely external to the reactor incident. You may rest assured you that there is no question of any Indian nuclear installation causing accident of any type which will release radioactivity because multiple processes are there. They will ensure that no radioactivity comes out of operating reactors. That is what we have done over a period of last 60 years. I think we have a robust R&D system in the Atomic Energy Commission. We are extremely careful about the safety aspect. It is safety first and production later. That is our philosophy.

Sir, I would like to assure the House, through you, that we have taken it very seriously. The magnitude of it, fortunately, was not grave as was mentioned by some hon. Members. It could have been even more serious. It is a wake up call of sorts that you cannot take anything lightly when any industrial activity takes place. Today happens to be the anniversary of a major industrial disaster. I think we cannot take any industrial activity lightly whether it is chemical or whether it is nuclear.

I assure the House that the culprit will be apprehended. We are sure because the inquiry is going on at various levels right from the intelligence agencies to the local police. We intend to find out who was the person and what was his motive. Of course, the whole aspect of the motive will be looked into.

I assure the House that the processes will be strengthened and we will look at the health of the people and future nuclear installations that we will build will be safer after the lessons that we have learnt. Thank you, Sir.

DR. (SHRIMATI) NAJMA A. HEPTULLA: Sir, you gave the answer. And you tried to give the answer as best as you can at this stage. The main thing is that it is very easy to find who the culprit is, because people having access to heavy water, which is taken out from the atomic plant to the service area, must be very limited. They must be people of some calibre. I don't think our Atomic

Energy Commission allows just anybody to come and pick up the sample of heavy water and go to lab for testing it. It is very easy to find out who had the access to those vials. It may be one person or two persons or ten people. I don't think hundred people are having access to that vial. So, it is very easy to find who the culprit is. You should not take long to conduct this inquiry. I hope before the House adjourns for recess, we will be able to get some reply from the Government, so that when we go home we are not worried about it, because we don't have access to the Government to ask questions.

SHRI PRITHVIRAJ CHAVAN: Sir, I share the concern of the hon. Member. The process there works like this. The people who tap the heavy water circuit and take the sample out of it are different people. They collect the sample in a vial and come out and keep that vial in the chemistry lab. They are a different set of people. The people who have access to that lab are known. They have been inquired and we will zero on that person. But to say that this particular person did it, is not possible at this stage, because the inquiry is going on.

As I said, there are many other things like whether this whole process of monitoring heavy water can be automated, so that no sample is required to be taken out of the system. That also will be considered in future.

I assure you that we are doing all that is possible for safety. Thank you, Sir.

THE VICE-CHAIRMAN (PROF. P.J. KURIEN): Now we shall take up the statement by the Minister on the visit of the Prime Minister to the United States of America. Shri S.M. Krishna.

Recent visit of the Prime Minister to United States of America

THE MINISTER OF EXTERNAL AFFAIRS (SHRI S.M. KRISHNA): Sir, I rise to inform the House of the visit of the hon. Prime Minister to the USA from November 22 to 26, 2009. I would like to share with this House the main outcome of the visit. As hon. Members are aware, the Prime Minister's visit to the United States marked the first bilateral Summit between India and the United States after the elections in America last November and our Parliamentary elections this year. It was also the first State visit to the United States by a foreign leader under the new Administration.

An important objective of the hon. Prime Minister's visit was to reaffirm the importance that India attaches to its relations with the United States, and to share our perspectives and concerns on key issues with the new US Administration.

President Obama conveyed to our Prime Minister that strengthening relations with India was one of the highest priorities for his Administration. Prime Minister conveyed to the President that the